

FIG.1

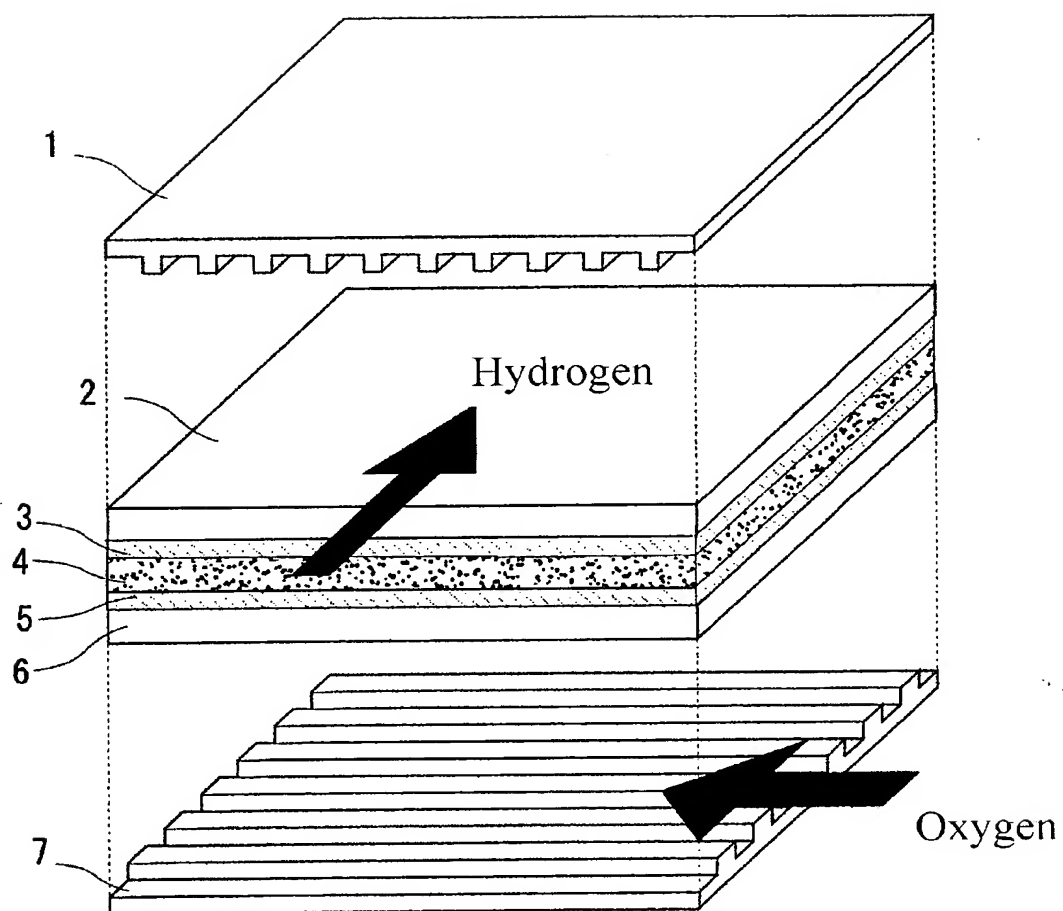


FIG.2

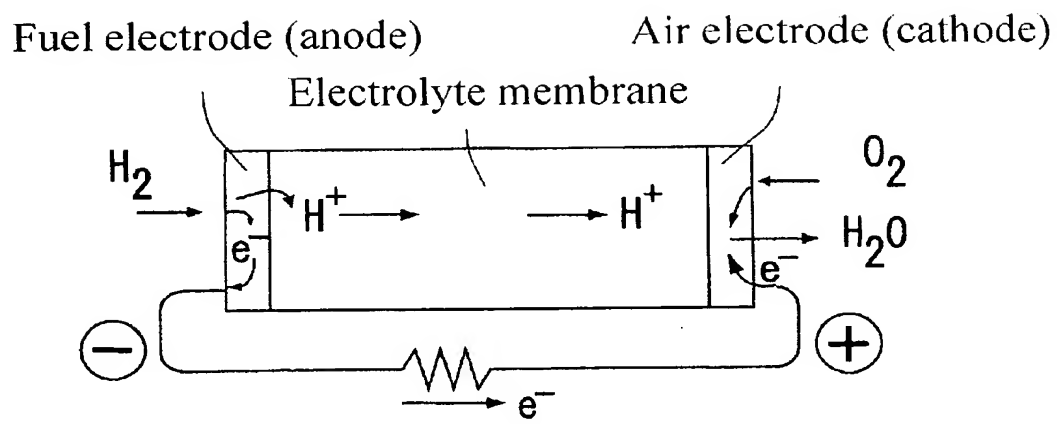
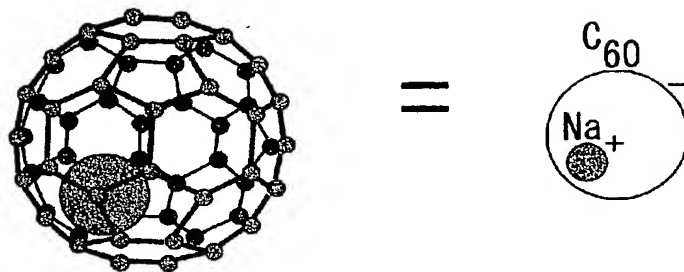


FIG.3

(a)  $\text{Na@C}_{60}$ 

(b) Electrolyte membrane

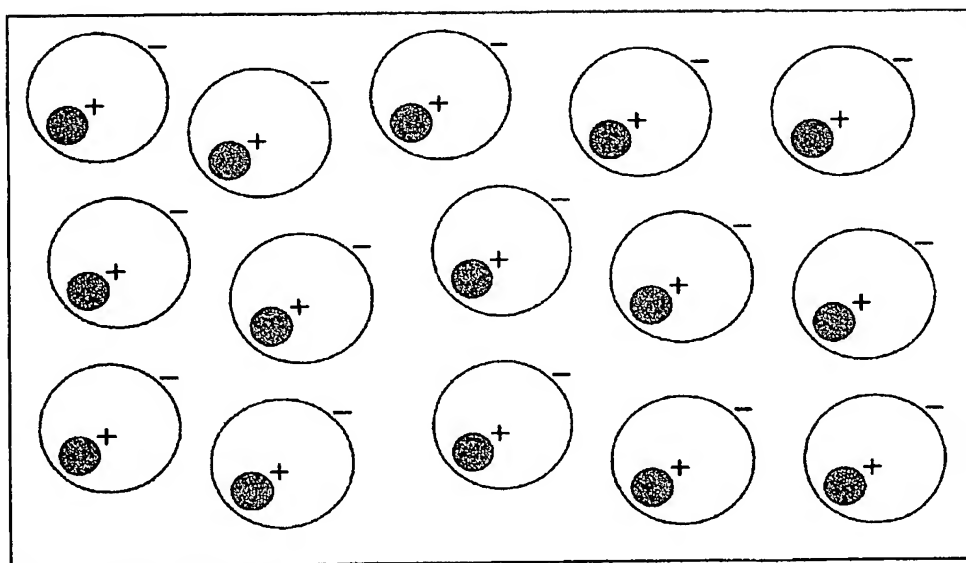


FIG.4

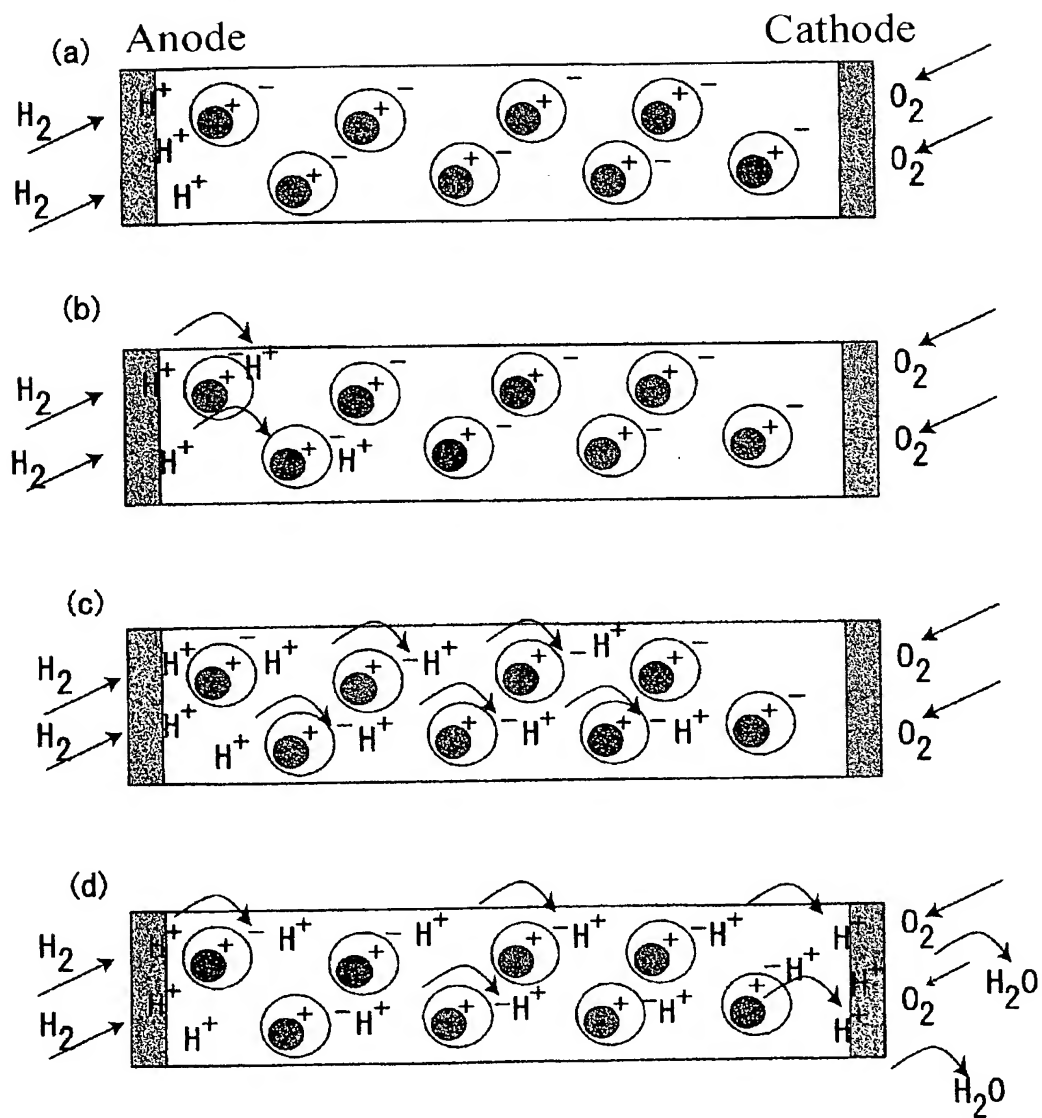
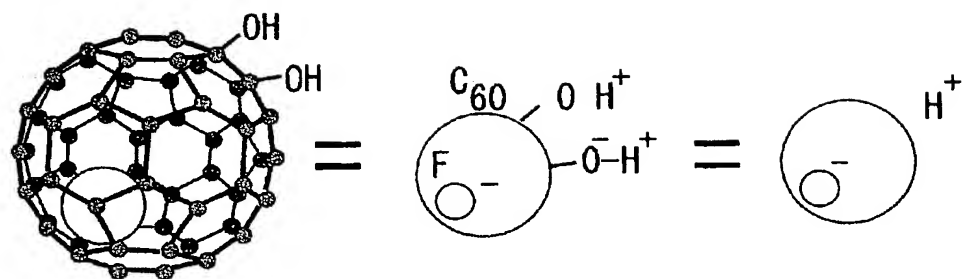


FIG.5

(a)  $F@C_{60}(OH)_2$ 

(b) Electrolyte membrane

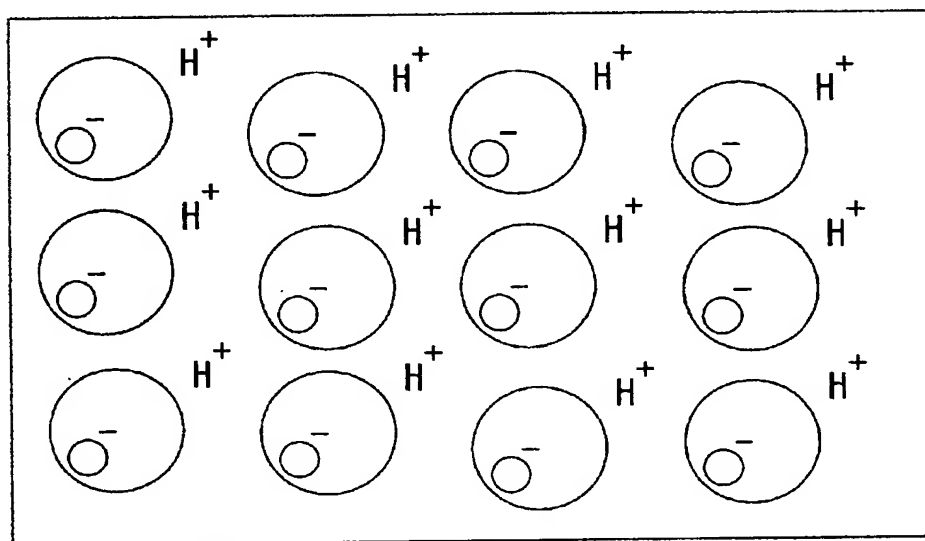


FIG.6

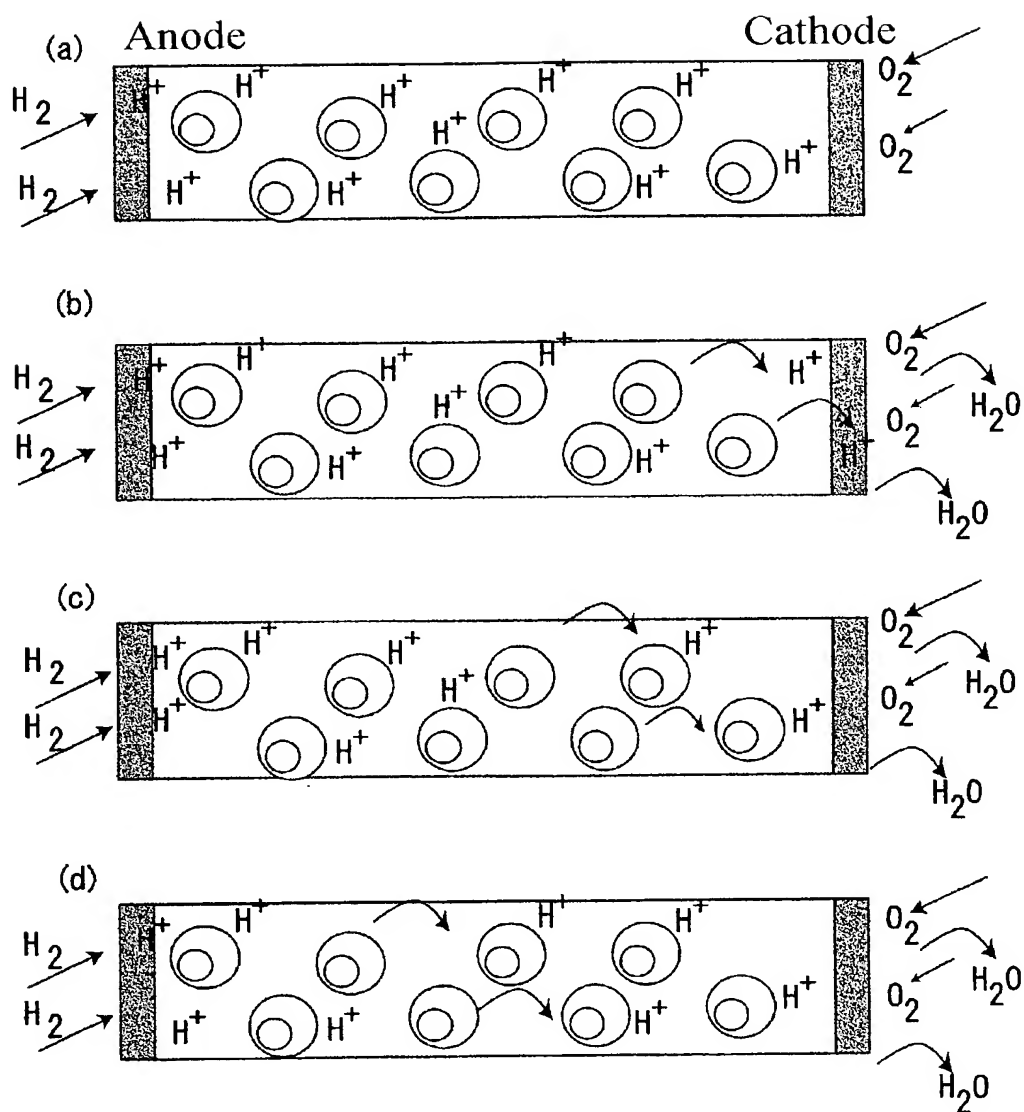
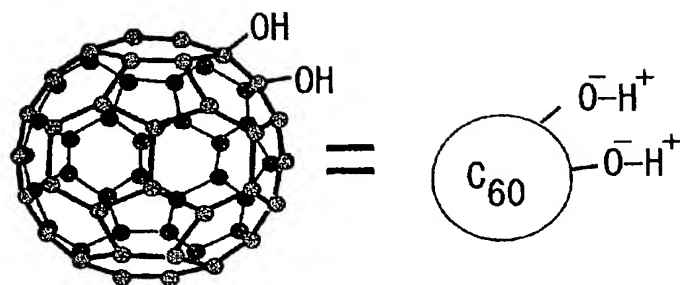


FIG. 7

(a)  $C_{60}(OH)_2$ 

(b) Electrolyte membrane

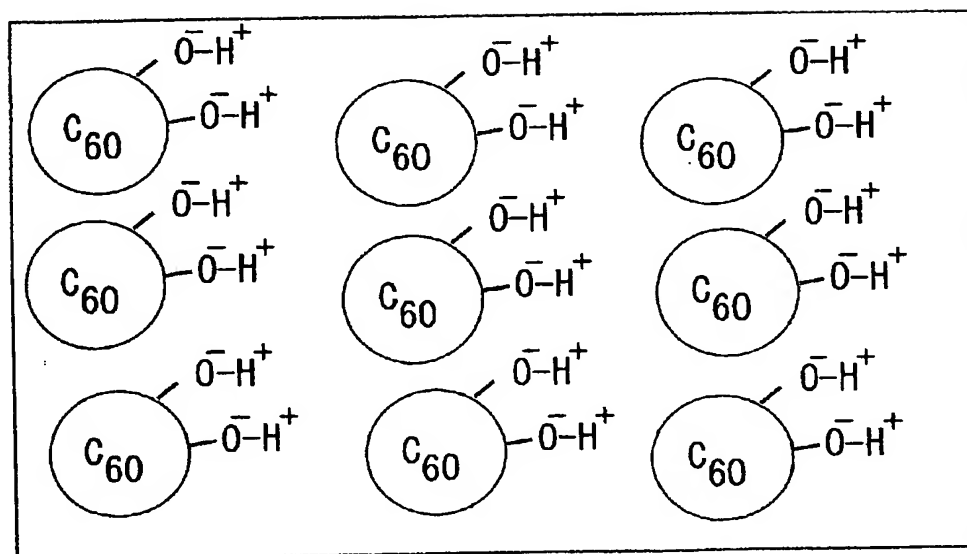


FIG.8

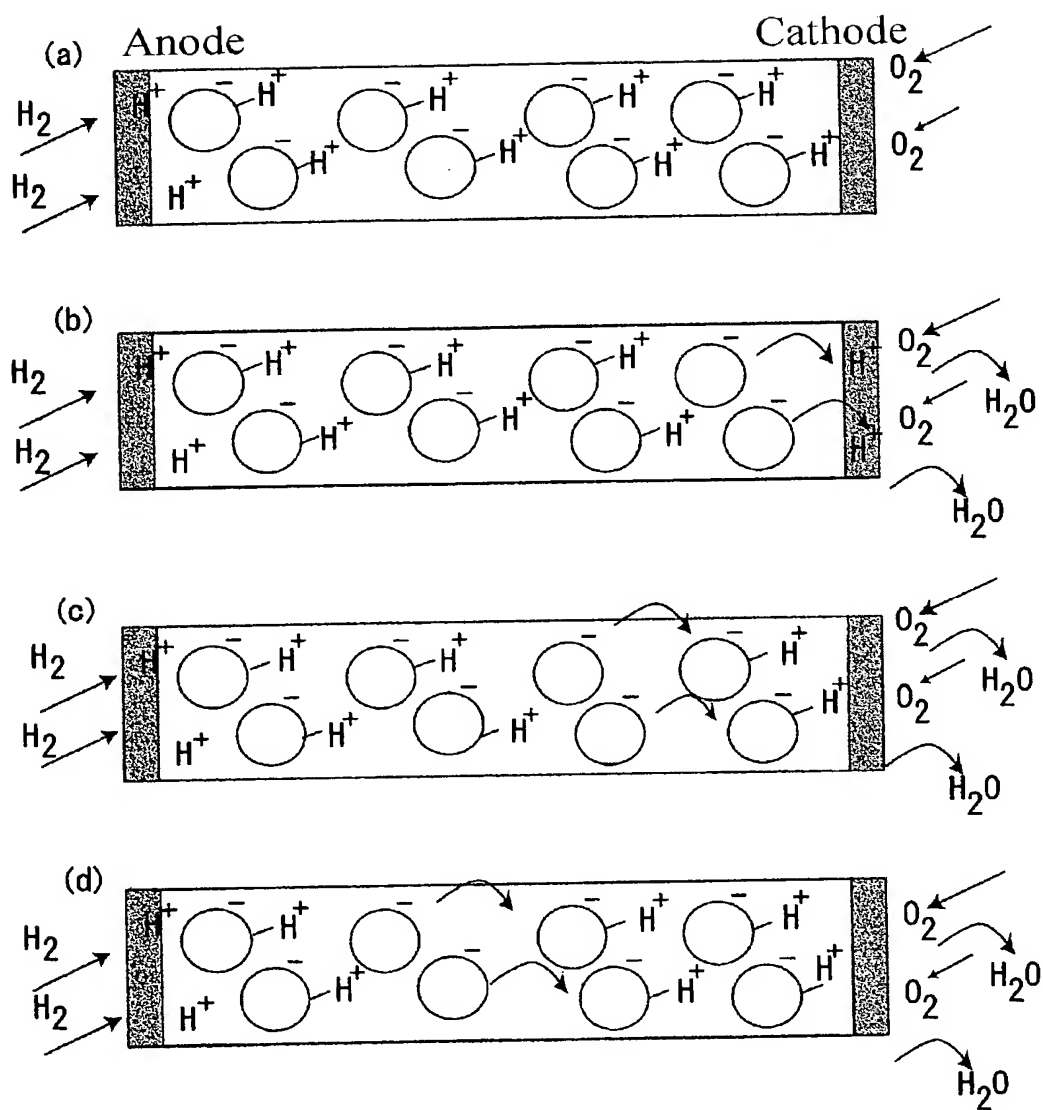
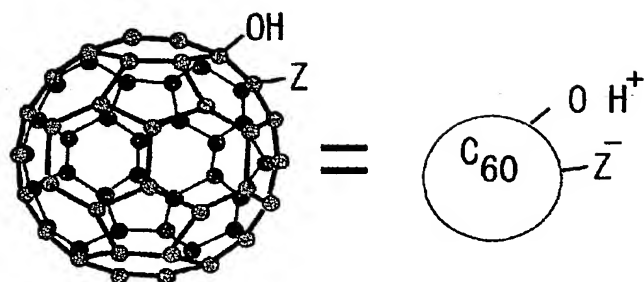




FIG.9

(a)  $C_{60}(OH)Z$ 

(b) Electrolyte membrane

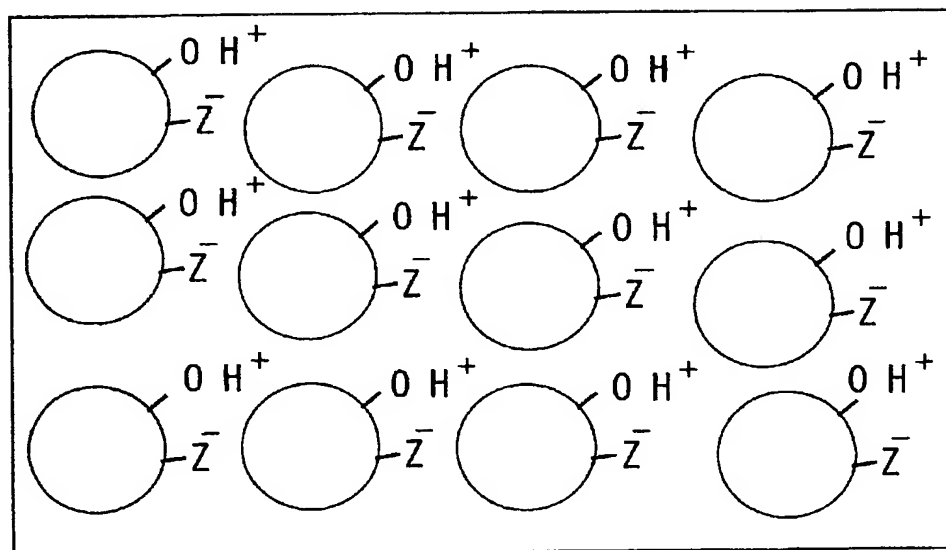


FIG.10

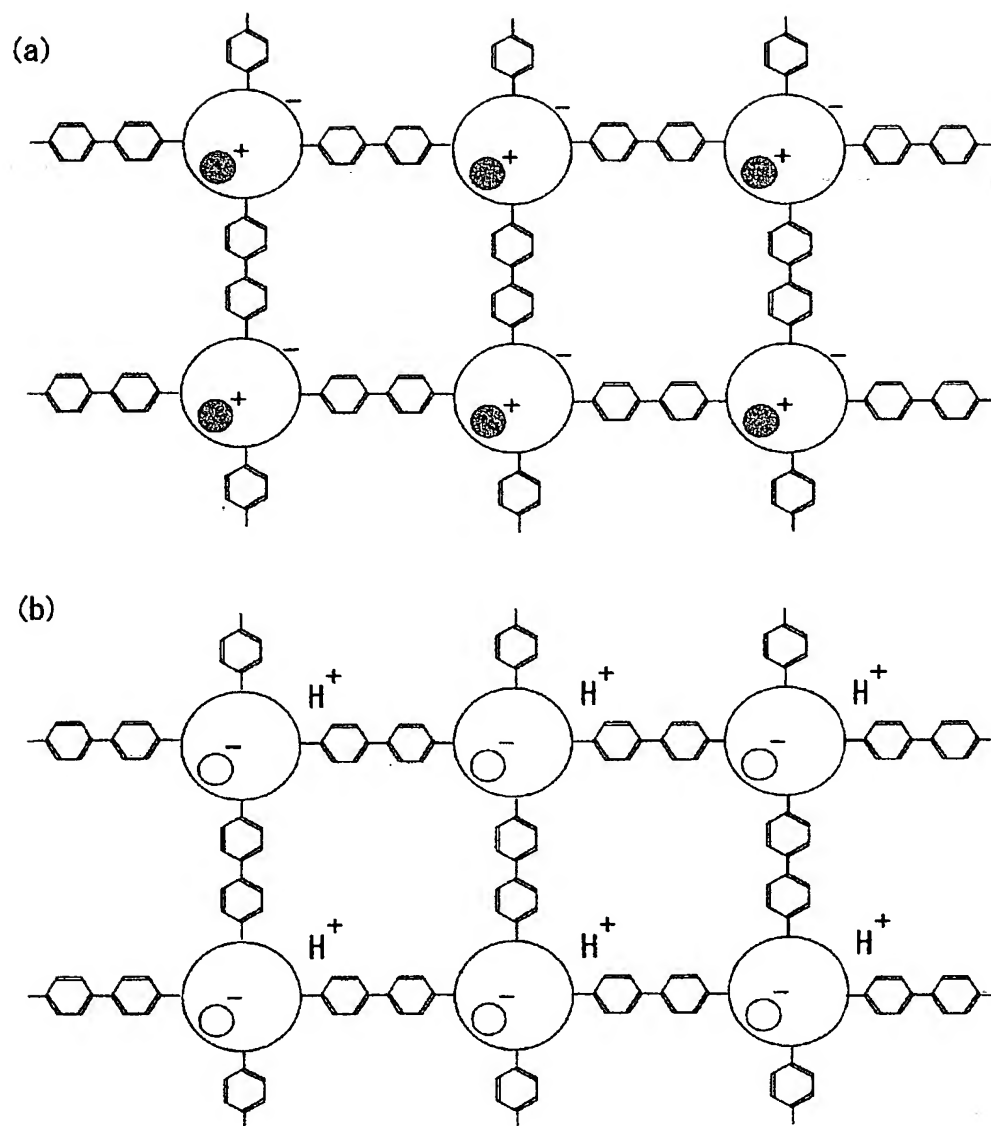
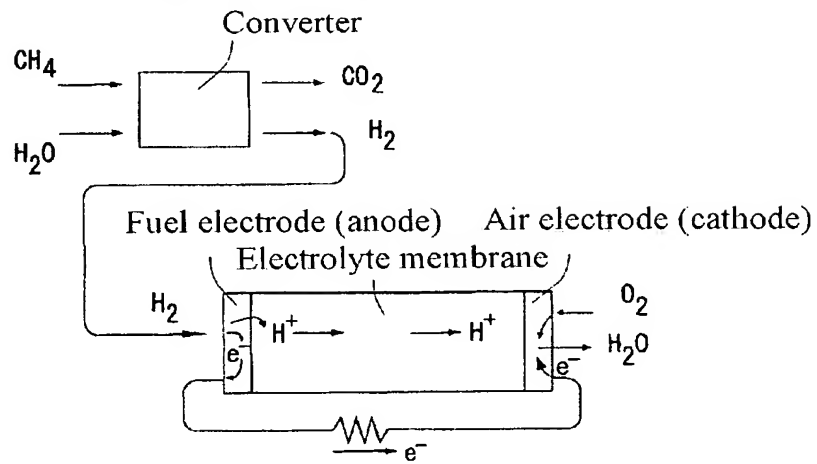
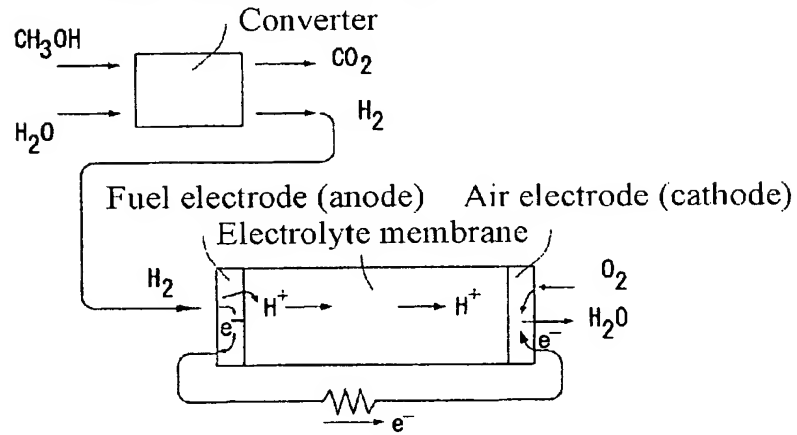


FIG.11

## (a) Converted methane type



## (b) Converted methanol type



## (c) Direct methanol type

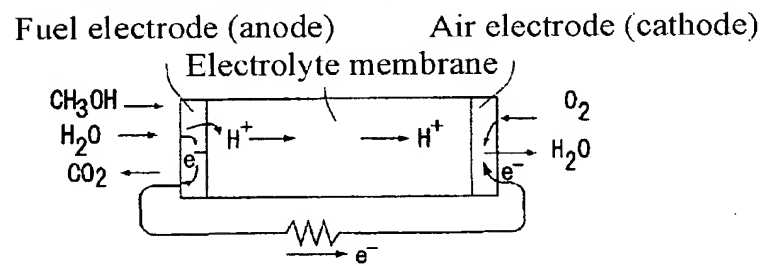


FIG.12

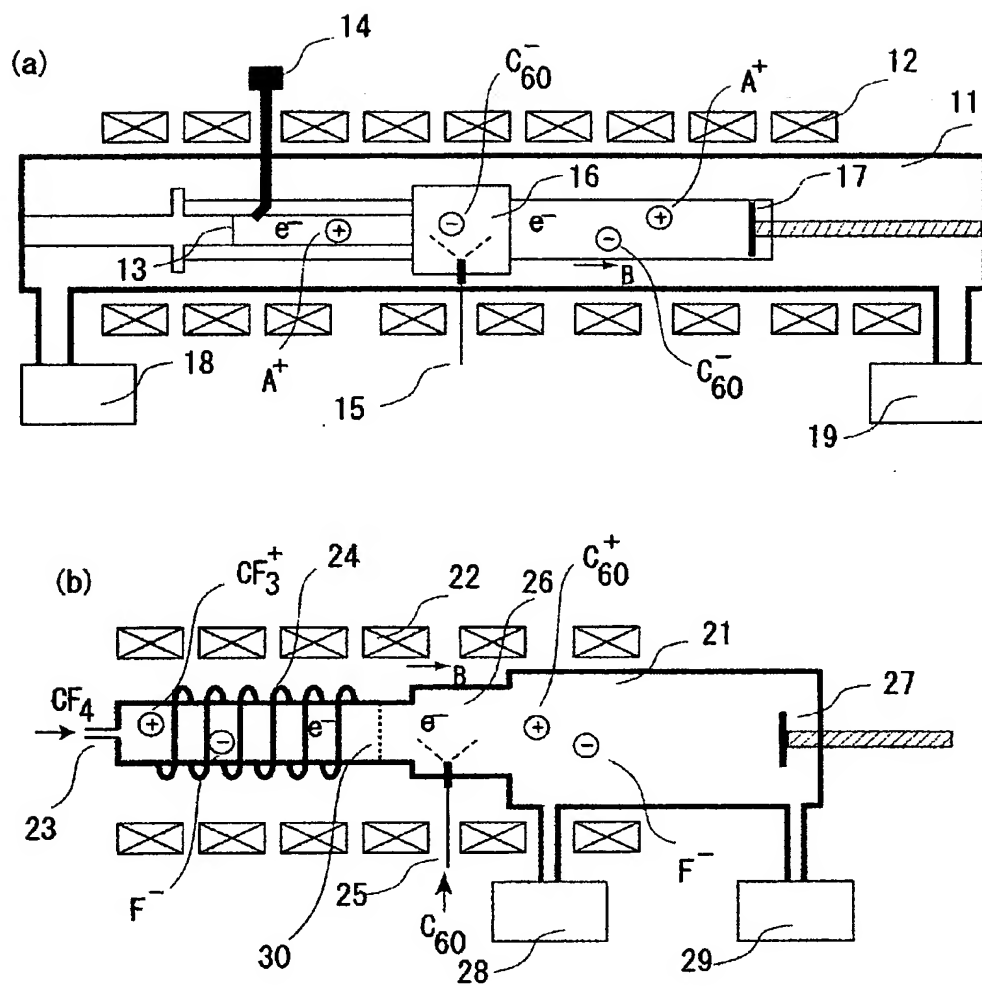


FIG.13

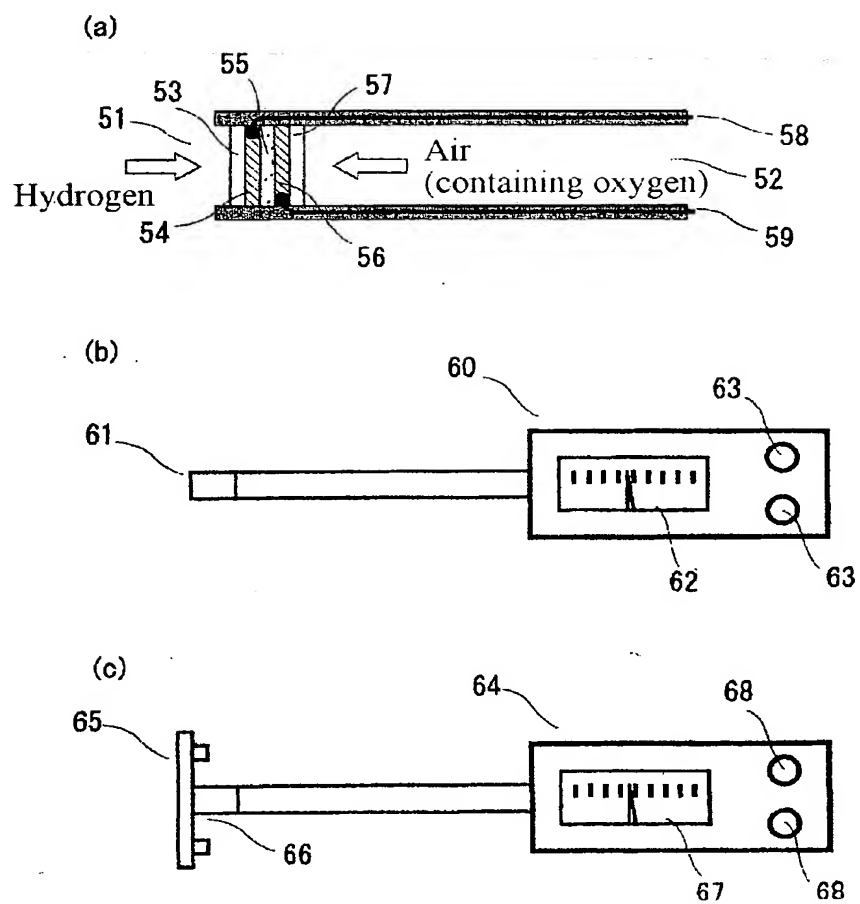


FIG.14

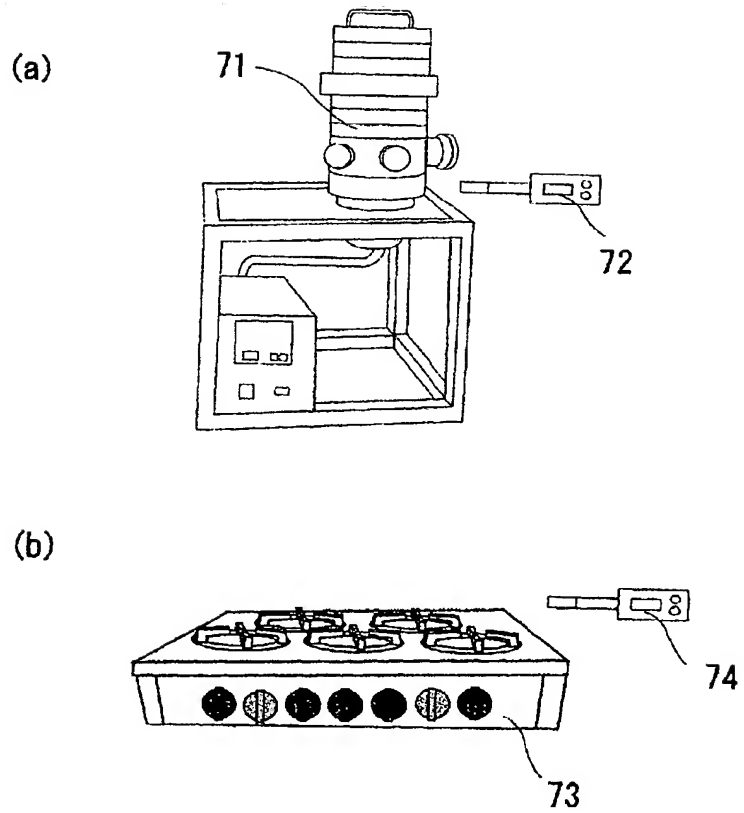


FIG.15

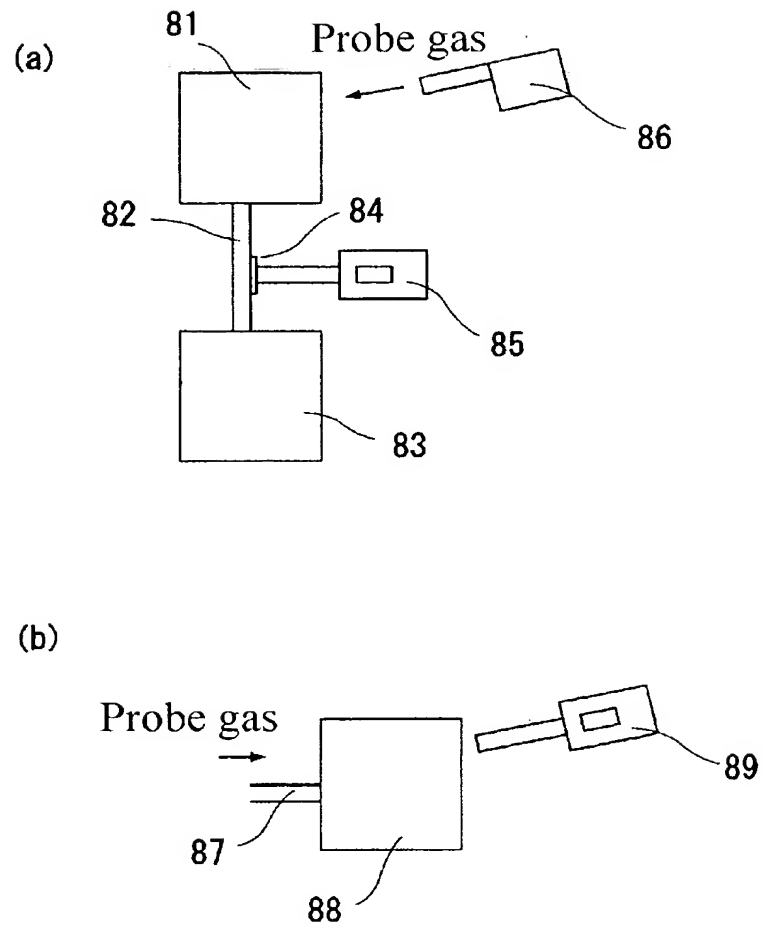


FIG.16

